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ABSTRACT

A study of young children's assignment of nouns to gender categories and general mastery of the Icelandic gender system is reported. An examination of what is involved in the induction of formal categories such as gender introduces the proposal of a "principle of localness." This principle states that the closer in proximity a closed class item is to an open class item, the more likely the closed class item will be chosen as a predictor of the categorical status of the open class item. The Icelandic gender system is briefly described, and studies of earlv rudimentary use of the three-way gender system are used to predict subsequent acquisition. Several experiments are reported that support the hypothesis of localness: one introduces novel nouns to three-year-olds, one is a case study of a two-year-old girl's conversation, and the third is a study of gender assignment to new nouns in 144 Icelandic children aged three, four, five, and six years. In the last study it was found that children made more accurate neuter assignments for introduced monosyllabic nouns, and more accurate masculine and feminine assignments for bisyllabic nouns. The effects of the relative localness of cues in this study are examined further. (MSE)

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THE ROLE OF "LOCAL CUES" IN ASSIGNING GENDER TO NEW NOUNS IN ICELANDIC

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In recent discussions of how children organize and reorganize form classes (e.g. Karmiloff-Smith 1979, Levy 1980, Maratsos & Chalkley 1980), noun gender categories have occupied a position of prominence. This is because, unlike most other grammatical categories, gender classes do not appear to have any plausible semantic basis. Of course, nouns referring to animate beings are typically assigned to genders in accordance with the sex of their referents, but, for the vast majority of nouns, assignment to gender categories is notoriously arbitrary. Thus, the study of the acquisition of noun gender may shed light on the role that purely formal factors play in the induction of form classes in general.

In this paper we will report on naturalistic and experimental data we have gathered bearing on young children's control of gender in Icelandic. First, however, we would like to make explicit what is involved in the induction of formal categories like gender. If the meaning of a noun is an unsure guide to its gender assignment, how are such assignments made? As Maratsos and his colleagues have stressed in a recent series of papers (Maratsos & Chalkley 1980, Maratsos 1981, 1982), gender classes are known by the company they keep. That is, it is the correlated network of co-occurring, typically closed-class forms that serves to identify a gender class. For example, masculine nouns in German are those that co-occur with the nominative definite article _der_, the accusative definite article _den_, take the nominative pronoun _er_, and so forth. Each of these co-occurring forms serves to predict (with varying degrees of certainty) all of the others, so that in order to assign a new noun to masculine gender, it is sufficient to obseve that, when in nominative case, it takes the article _der_. Maratsos has noted that such correlated networks of co-occurring forms are characteristic not only of gender classes, but of major form classes as well. For example, verbs in English are those words which typically take _-ed_ past tenses, _-s_ present tense following third person singular arguments, can follow forms of the auxiliary and _do_, etc. Nouns in English take _-s_ plural and possessive endings, can follow the article _the_, and so forth.

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How, then, do children construct categories like "masculine gender"? Briefly, Maratsos has theorized that the child acquiring German might note that some noun X occurs in nominative case and is accompanied by der. Later, the child notes that X occurs in accusative cases with den and is pronominalized with er. The child also notes that when some noun Y occurs in the nominative case, it too is accompanied by der and pronominalized by er. By tabulating these patterns of co-occurrence--in short, by performing a distributional analysis--the child builds up the network of co-occurring forms which collectively define masculine gender. As Maratsos notes, however, the child cannot be engaging in any simple form of distributional analysis. It is unlikely that the child considers every co-occurring form as a potential predictor. To see why this must eventually be so, consider that, statistically, verbs in English probably co-occur more often with the article the than with the past tense -ed, while nouns probably co-occur more often with tense markers than they do with the possessive -s. Yet, in both cases, the latter form is clearly a valid predictor, while the former is not. Of course, it is logically possible that the child could initially consider, say, a co-occurring the to be a predictor of verb status, only to discard this predictor at a later point, but this seems highly unlikely. Form class errors in acquisition, while not unattested, are vastly less common than would be expected if the child were in fact performing a trial and error distributional analysis.

The problem, then, is to identify how the child defines potential form class predictors. One possibility, noted (though not necessarily espoused) by Maratosos and by Pinker (1982), among others, is that innate factors might guide the selection of potential predictors. It seems to be the case that form class predictors are drawn largely from closed classes. One could imagine that child coming to the acquisition task primed to expect open and closed classes. One might even imagine that the child comes equipped with some ability to distinguish between these classes, for example, on an acoustic basis; it is often noted that closed class items, at least in English, do not receive sentential stress. But even granting these abilities, the problem remains: how does the child identify which closed class item is predictive of which form class?

One possibility is that a closed class item can be identified as a category predictor if it modulates the meaning of members of that category. Thus, the and the plural and possesssive -s markers modulate the meanings of nouns, while -ed modulates the meaning of verbs, and so on. In some cases, however, the same closed class items may modulate the meanings of more than one form class in comparable ways and are thus ambiguous predictors at best. For example, in Icelandic the endings -ar and -ir are suffixed not only to nouns to indicate plurality but also to adjectives. Therefore they cannot be taken as clear predictors of either of these two major form classes although they do affect meaning. Conversely, in some languages, words in particular gender categories may have distinctive phonological characteristics (e.g. Hebrew feminine singular nouns tend to end in either -a or -on), but these characteristics correlate with semantic distinctions such as natural gender for only a minority of the nouns displaying them. Thus, it seems unlikely that the selection of potential form class predictors is based solely on semantic considerations.

A remaining possibility is that there is a syntactic or formal basis for the identification of potential predictors. By and large, the co-occurring predictors that Maratsos has identified tend to be typically either affixes or phrasemates of the open class words whose categories they identify. Based on the analysis of a series of cross-linguistic acquisition studies, Slobin (1982) has argued that closed class items, such as locative particles, are acquired most readily in those languages like Turkish where they are local to the open class item whose meaning they modulate. What we are suggesting here is that this notion of "localness" also plays a role in the induction of open class categories. Specifically, we are proposing a principle of localness: the more local a closed class item typically is to an open class item, the more likely it will be that the closed class item is chosen as a predictor of the categorical status of the open class item. To our knowledge, Slobin has not offered an explicit definition of "localness", although his examples of local cues in Turkish involve affixes. Thus, we need to supplement our localness principle with a definition. Accordingly, we are proposing that there is a hierarchy of localness. A predictor that is part of the stem, as in the Hebrew gender endings, is the most local, an affix is the next most local, followed by a phrasemate, clausemate, sentencemate, and so forth. Therefore we would predict that children learning German, for example, will be more likely to exploit articles, which are usually phrasemates of nouns, than pronouns, which are not, in constructing noun gender categories.

This principle of localness, however, will not suffice in itself. Consider again the non-predictive relationship between articles and verbs in English. Assuming that verb phrases exist, then articles (when they occur with accusative arguments) are local to verbs, and, by our principle, should be categorically predictive. Obviously, this is wrong. Clearly, no single item can be simultaneously predictive of two or more contrastive categories. We suggest that when such a conflict arises, the item must be taken to be predictive of the category to which it is typically more local. If follows from this that in the case of verbs, nouns, and articles, articles are predictors of the form class noun, as should be the case.

We can summarize our two hypotheses about the role of "localness" in the induction of form classes as follows:

A. The likelihood that a closed class form will be taken to be a predictor of the categorization of an open class form is a function of the localness of the former to the latter. There is a hierarchy of localness, descending from affix to phrasemate, clausemate, sentencemate, etc.

B. No form can be simultaneously predictive of two or more contrasting categories. Rather, a form will be taken to be predictive of that category to which it is typically more local.

With these principles in mind, we turn now to our discussion of data bearing on the child's mastery of the gender system in Icelandic. We will begin with a brief description of this system. Icelandic, like its cousin language German, subdivides nouns into three gender categories, mascu-

line, feminine and neuter. For nouns referring to animate beings with natural gender, the semantic categories male and female correlate roughly with the grammatical categories masculine and feminine. Gender classification of nouns referring to inanimate objects is semantically arbitrary. Taking into account the phonological properties of nouns, we observe that certain noun endings tend to be correlated with particular genders. For example, a nominative singular noun ending in -a is highly likely to be feminine, while a nominative singular nouns ending in -i or -ur are most typically masculine. However, none of these endings is perfectly predictive, and most other noun forms are even less reliably predictive of particular gender categories. The problem posed for Icelandic-learning children, then, is to discover a basis for making this three-way gender distinction that they can rely on when they encounter new nouns. Ultimately, the most dependable information about the gender of unfamiliar nouns in Icelandic comes from noting the gender of co-occurring gender-marked forms such as pronouns, numerals, adjectives and determiners.

Longitudinal records of Icelandic children's language acquisition (Mulford, unpublished data) give ample evidence that they master at least the rudiments of a three-way gender system well before they are three years old. Since the children develop gender categories so early, it is difficult to observe directly the antecedents of these categories. However, if our hypotheses are correct, we can make some predictions that should apply beyond the period of initial category formation. First, we should expect errors or inconsistencies in gender agreement to be more likely as the distance between the gender-determining noun and a co-referring form increases. Second, we should expect that children will weight more local cues more heavily in assigning gender to unfamiliar nouns. We will present observational evidence bearing on this first prediction and experimental evidence bearing on the second one.

First, we have observed a number of examples of errors in gender agreement in adult speech such as the following:

(1) Child: Eg er hraedd vid þetta.
'I'm afraid of that [inanimate/neuter].'
Adult: Nei, ertu hraedd við ljónið? Hann er svo góður. Hann er að klóra sér bak við eyrað.
'No, are you afraid of the lion [neuter]? He's so good [masculine]. He's scratching (himself) behind the ear.'

(2) Adult A: Ljónið er nýkomið í dag frá Ameríku.
'The lion [neuter] is newly arrived [neuter] today from America.'
Adult B: Hann var að koma frá útlöndum. Hann er voða þreyttur.
'He just came from abroad. He's very tired [masculine].'

The topic of these conversations is a toy lion. The word for lion, ljón, is neuter but there is an inclination among many Icelanders, probably semantically derived, to refer to lions with masculine forms. Note that adults in both examples use the masculine pronoun hann and masculine adjective forms like góður 'good' and þreyttur 'tired' with reference to the lion. The gender errors of this type that we have observed in spontaneous speech tend strongly to involve nonlocal forms, i.e. to involve

reference across sentence boundaries. We have rarely observed mature speakers making gender errors involving affixes or phrasemates of nouns.

Some additional data concerning adult productive gender errors come from a quasi-experimental setting in which adults introduced novel nouns (i.e. nonsense forms) to their three-year old children. Each nonsense word referred to a brightly colored character in a picture, and the parent's task was simply to elicit the appropriate color name from the child. A subset of these sessions were recorded and transcribed, and we tabulated all the adults' uses of gender marked forms. The results of these tabulations are given in Table 1. As you can see, the proportion of within-phrase gender-marking errors, including affix errors, is quite small while the proportion of gender-marking errors across a sentence boundary (that is, in the "other" category) is substantially higher. Taken together, these adult data suggest another reason why children might attend preferentially to local cues: having such a bias would allow children to filter out the preponderance of agreement errors in their input.

	% correct	% incorrect
Same NP (includes affixes)	94 (62)	6 (4)
Same Sentence	42 (5)	58 (7)
Different Sentence	58 (85)	42 (62)

TABLE 1
Proportions of gender agreement errors by syntactic context in adult picture descriptions (absolute numbers in parentheses)

We have found similar patterns of gender-marking errors in the speech of young children as well. We examined all gender-marked forms produced by one Icelandic girl during three hours of transcribed conversation while she was between the ages of 2;1 and 2;9. In all cases where it was possible to determine what the gender of a form ought to have been, we noted whether the form actually used by the child was correct in gender or not. Table 2 gives the results of this analysis. Note that the

	% correct	% incorrect
Same NP (includes affixes)	98	2
Same Sentence	95	5
Different Sentence	83	17
Exophoric Reference	86	14

TABLE 2
Proportion of gender-marking errors by syntactic context in spontaneous productions of a two-year child

child made very few gender-marking errors when the form was a phrasemate of the noun and progressively more errors as the distance between the form and the noun increased. These data indicate that localness does in fact interact with gender-marking.

In order to examine more closely how this interaction operates, we devised an experiment in which children were introduced to new nouns. Each noun referred to a brightly colored, sexless nonsense being in a specially created picture book. The child's task was to listen to a brief description of the picture and then to tell the experimenter the color of the referent. Since color terms are unambiguously gender-marked in Icelandic, the child's response revealed how he or she had categorized the unfamiliar noun.

The design of our experiment is sketched in Table 3. Across conditions, we manipulated the phonological form of the nonsense nouns that were used. Children in Condition 1 received monosyllabic nouns. Existing nouns of this type in Icelandic are relatively evenly distributed across the three genders. We took particular care to create novel forms with possible rhymes/analogies in at least two different genders. (See Appendix A.) In Condition 2, a second group of children received bisyllabic nouns ending in <u>-a</u> and <u>-i</u>. The <u>-a</u> nominative singular ending on nouns in Icelandic is strongly associated with the feminine gender and the <u>-i</u>

		Masculine	Neuter	Feminine
Condition 1	Monosyllabic Noun	brein	brein	brein
	Noun + Article	brein+inn	brein+ið	brein+in
Condition 2	Bisyllabic Noun	neli	neli dúla	dúla
	Noun + Article	neli+nn	neli+ð dúla+ð	dúla+n
Cues	'another'	annar	annað	önnur
	'one'	einn	eitt	ein
	Pronoun	hann	það	hún

<u>Examples of Syntactic Frames:</u>

<u>NP:</u> Hérna er <u>einn neli</u>. Hvernig er <u>nelinn</u> á litinn?
'Here is <u>one neli</u>. What color is <u>the neli</u>?'

<u>S:</u> Hérna er <u>neli</u> sem er <u>einn</u> á myndinni. Hvernig er <u>nelinn</u> á litinn?
'Here is [a] <u>neli</u> who is <u>alone</u> [lit. one] in the picture. What color is <u>the neli</u>?'

<u>X:</u> Hérna er <u>neli</u>. Er bara <u>einn</u> svoleiðis á myndinni? Hvernig er <u>nelinn</u> á litinn?
'Here is [a] <u>neli</u>. Is there only <u>one</u> like that in the picture? What color is <u>the neli</u>?'

TABLE 3
Major factors in the experimental design

nominative singular ending tends to be masculine. (See Mulford 1983 for more details). Thus, these two conditions allowed us to assess the effects of the most local of cues, phonological form.

Each new noun was introduced in the context of a two- or three-sentence picture description and appeared in nominative case in both indefinite and definite forms. Since there is no indefinite article in Icelandic, the first noun form given was simply the nominative singular noun. The definite article in Icelandic is a suffix. Although the masculine and feminine article forms are spelled differently (-(i)nn and -(i)n respectively), they are pronounced the same and contrast with the neuter article -(i)ð. In addition, each noun co-occurred with one of three unambiguously gender-marked forms ("cues"), either 'another,' 'one,' or a nominative singular personal pronoun. Within subjects, we manipulated the relative location of this additional gender-marked form, by providing three syntactic frames for each type of cue. The gender-bearing form could appear in the same phrase as the noun, in the same sentence (but not in the same nounphrase) as the noun, or in a different sentence from the noun. Examples of the three frame types using the cue 'one' are also given in Table 3. Altogether, in Condition 1 there were 27 possible trials: three genders x three cue types x three frames. Each child received 18 of these trials, presented in a unique order as determined by a Latin square. In Condition 2 there were 18 possible trials: two genders per noun type (i.e. Masculine or Neuter for -i nouns and Feminine or Neuter for -a nouns) x three cue types x three frames. Each child in the second condition received all eighteen of these trials, again presented in a unique order. For each subject in each condition there were the same 18 novel nouns, randomized across trials such that each noun occurred equally often in each gender and each frame within each age group. [The complete list of novel nouns for Condition 2 is included in Appendix B.]

The subjects included 144 Icelandic-speaking children living in the Reykjavík area. Eighteen children served in each condition in each of four age groups: three, four, five and six years old. Each child was tested individually at home or school by the same adult native speaker. Each was given a pretest to insure that he or she could provide correctly gender-marked color adjectives for the familiar nouns stelpa [Fem.] 'girl', strákur [Masc.] 'boy' and blóm [Neut.] 'flower'. All children passed this pretest.

Probably the most striking result of this experiment concerns the difference in accuracy of gender assignment across the two conditions. These results are shown in Figure 1. Subjects receiving monosyllabic nouns were most accurate in making neuter gender assignments, whereas subjects receiving bisyllabic nouns were much more accurate in making masculine or feminine gender assignments. The superiority of performance for masculine and feminine gender in this second condition appears to be attributable to the presence of the gender-correlated endings -i and -a. The pattern of responses in this condition is shown in somewhat more detail in Table 4. Consider the responses made to nouns ending in -i and associated with neuter gender cues. The errors made on these items are strongly biased toward making masculine responses with some 88% of the errors being masculine. This pattern suggests strongly that children are latching onto this -i ending as an indicator of masculine gender. A

complementary pattern of errors appears with neuter nouns ending with -a. Here most of the errors (92%) are feminine.

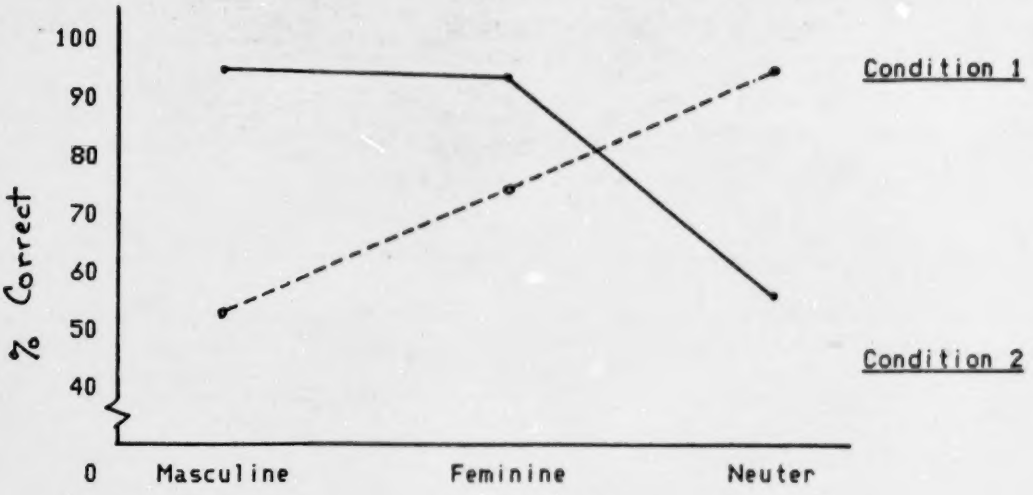

FIGURE 1
% Correct Responses by Gender and Condition

Noun Form Type	-i		-a	
Cue Gender	Masculine	Neuter	Feminine	Neuter
Response Gender				
Masculine	94	35	5	5
Feminine	5	5	93	43
Neuter	1	60	2	52

TABLE 4
% Responses by Noun Form, Cue Gender and Response Gender in Condition 2
(correct responses are underlined)

On the other hand, the errors occurring in Condition 1 with monosyllabic nouns, as shown in Table 5, show no such clear pattern. This indicates that the results from the second condition were not simply due to a general bias toward making masculine or feminine responses. In fact, in the monosyllabic condition, there is no clear phonological basis in terms of nominative noun form for making gender distinctions. Why then is there superior performance in making neuter assignments? We believe that this result may be due to children's attending to the next most local cue, the definite article. As we mentioned above, although the masculine and feminine articles are spelled differently, their pronunciation is only distinguished, if at all, in excessively careful speech. Thus we might expect masculine and feminine gender assignments which rely on the form of the articles to be confused with one another. This does appear to be the case for masculine nouns in Condition 1, where 65% of all errors are

feminine. The expectation is less well supported for feminine nouns, where errors are evenly distributed between masculine and neuter responses. In contrast, the neuter definite article is much more distinctive and errors on neuter stimuli were much rarer.

Cue Gender	Masculine	Feminine	Neuter
Response Gender			
Masculine	53	13	3
Feminine	31	74	4
Neuter	17	12	94

TABLE 5
% Responses by Cue Gender and Response Gender in Condition 1
(correct responses are underlined)

So far we have demonstrated effects on gender assignment of the two most local cues, stem form and affix form. Does the relative localness of an associated gender-marked cue determine how it will weigh in the child's gender assignments? Recall that we manipulated the syntactic frames in which these cues were presented. The results, broken down by frame types and age groups, are presented Figures 2 (for Condition 1) and 3 (for Condition 2). Recall that our hypothesis was that children will weight more local cues (e.g. within the same nounphrase) more heavily than less local cues (e.g. in a different sentence) when asked to assign gender to unfamiliar nouns. The data from Condition 1 weakly support this hypothesis in that there is a trend in the direction of more distant cues having less affect on gender assignments. However, the data from Condi-

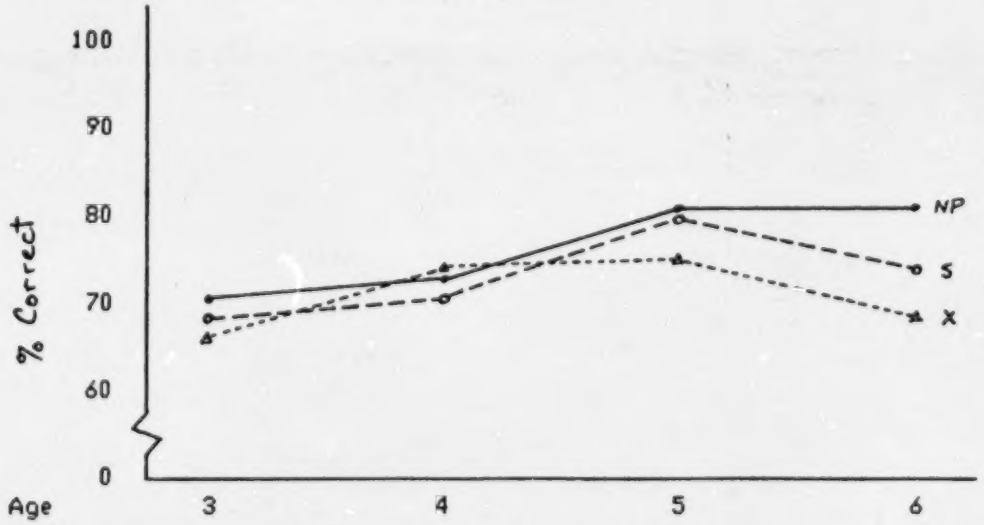

FIGURE 2
% Correct Responses by Age and Frame Type for Condition 1

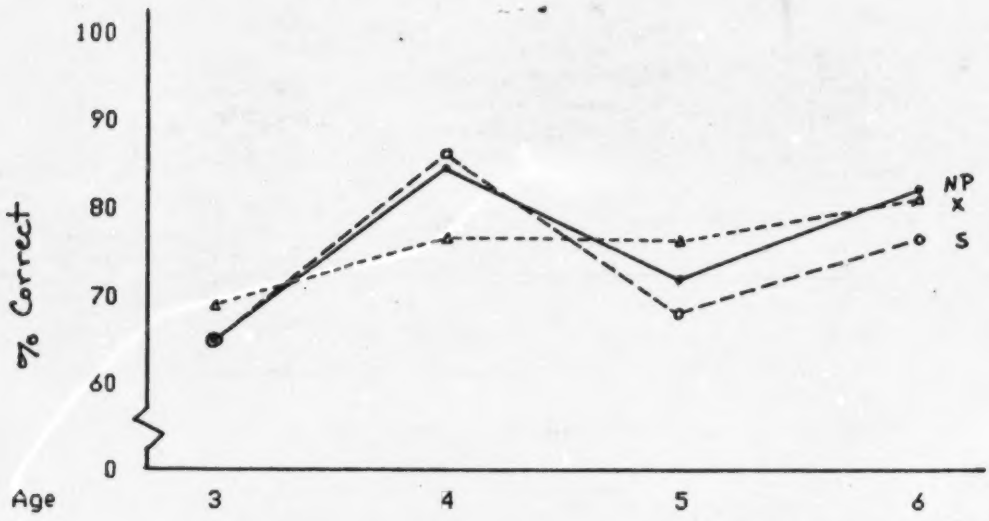

FIGURE 3
% Correct Responses by Age and Frame Type for Condition 2

tion 2 do not support the hypothesis. If there are any trends here at all, they would seem to be in precisely the wrong direction. In fact, the data from Condition 2 are rather puzzling, with five-year olds performing worse than four-year olds. We have no idea why that should be so. However, in general, it may be the case that the localness effects of these associated gender cues are being masked by the presence of the even more local cues discussed above. We hope to resolve this question in further research.

In sum, we have argued that a scheme of unbiased induction cannot successfully account for the child's acquisition of grammatical categories. Instead, a bias towards considering co-occuring forms which are typically more local and unambiguous would help to skirt many of the problems that would otherwise arise during the process of induction. We have discussed our hypotheses in relation to data about gender-marking in Icelandic. Our data indicate that adult gender-marking errors tend to involve forms nonlocal to the gender defining noun. Thus, if children do have the biases we have suggested, they would have a useful means of filtering out erroneous input. We have also presented data indicating that children's gender marking errors tend to respect a hierarchy of localness as well. Finally, our experimental evidence suggests that the most local cues, phonological form of noun stems and immediate affixes, have the strongest effect on children's gender categorizations of unfamiliar nouns, while gender-marked forms occurring at greater distances have correspondingly less effect. Taken together, our data suggest that the dimension of localness is relevant to the child's acquisition and deployment of gender categories. Slobin (1982) has argued that localness plays a role in the child's acquisition of closed-class forms. We are suggesting that localness also plays a role in the child's construction of open class categories.

REFERENCES

Karmiloff-Smith, A. (1979) A Functional Approach to Child Language. Cambridge: Cambridge University Press.

Levy, Y. (1980) The non-interaction of linguistic and cognitive notions of gender in the language of young children. Unpublished ms., The Hebrew University, Jerusalem.

Maratsos, M. (1981) Problems in categorial evolution: can formal categories arise from semantic ones? In W. Deutsch (ed.) The Child's Construction of Language. London: Academic Press.

Maratsos, M. (1982) The child's construction of grammatical categories. In E. Wanner & L.R. Gleitman (eds.) Language Acquisition: The State of the Art. Cambridge: Cambridge University Press.

Maratsos, M., & Chalkley, M.A. (1980) The internal language of chilren's syntax: the ontogenesis and representation of syntactic categories. In K.E. Nelson (ed.) Children's Language. Volume 2. New York: Gardner Press, Inc.

Mulford, R. (1983) Semantic and formal factors in the comprehension of Icelandic pronoun gender. Papers and Reports on Child Language Development 22:83-91.

Pinker, S. (1982) A theory of the acquisition of lexical-interpretive grammars. In J. Bresnan (ed.) The Mental Representation of Grammatical Relations. Cambridge, Mass.: M.I.T. Press.

Slobin, D.I. (1982) Universal and particular in the acquisition of language. In E. Wanner & L.R. Gleitman (eds.) Language Acquisition: The State of the Art. Cambridge: Cambridge University Press.

APPENDIX A

Nonsense words used in Condition 1
and possible real-word analogies with gender classifications

blfs	fs, grfs M; flfs F
brein	grein F; bein N
bund	stund F; sund N
dál	nál, skál F; mál, kál N
dróð	lóð, þjóð F; blóð, ljóð N
dvaer	baer M; aer F
fið	hlið F,N; svið, lið N
gról	bót, rót F; dót, sót N
gúr	túr M; skúr M,F; búr N
kax	lax M; fax, vax N
krjón	sjón F; tjón, ljón N
lafn	hrafn M; nafn, safn N
norg	sorg, borg F; torg N
pörn	örn, björn M; tjörn F
stauf	klauf F; lauf N
söld	öld F; kvöld N
terð	ferð F; sverð N
vaft	saft F,N; skaft N

APPENDIX B

Nonsense words used in Condition 2

Ending in -i: bóski, buni, darti, foddi, lerti, neli, páni, stakki, tessi

Ending in -a: brala, darga, dúla, gúsa, gutta, kíma, kraða, sora, vaga